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ABSTRACT

A study on access to higher education in Germany was written as part of a larger study on access and admission in that country and the United States. The complex dimensions of the access situation in Germany are set forth, along with the many factors that have produced crisis: demographic trends, reforms in secondary education, legal and constitutional considerations, and employment expectations of graduates. The history and administration of admission to higher education in Germany are described, and changes in current laws governing access and admission are examined. (MSE)

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BARRIERS TO HIGHER EDUCATION

IN THE FEDERAL REPUBLIC OF GERMANY

WILLI BECKER

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FOREWORD

IN 1975 the International Council for Educational Development organized a comparative study of access policy and admissions practice with respect to higher education in the Federal Republic of Germany and the United States. This study, financed by a grant from the Volkswagen Foundation, was supervised by a joint German-U.S. Study Group, chaired by James A. Perkins, chairman of ICED, and directed by Barbara B. Burn, director of International Programs at the University of Massachusetts. The final Study Group report will be issued in early 1978.

During the course of the study, a number of special papers were commissioned and several conference reports were prepared. While all these documents made important contributions to the deliberations and final report, a few of them have such universal interest that it was decided to print them as part of the publication program of the access study.

Willi Becker sets forth the complex dimensions of the access situation in the Federal Republic of Germany and the many factors which have produced a crisis in it, among them: demographic trends, reforms in secondary education, legal and constitutional considerations, and employment expectations of graduates. His analysis makes clear that in undertaking a comparative study of access in Germany and the U.S., the Study Group assumed a timely and difficult task.

While the access study was basically a German-U.S. project, the problems examined are surely universal. For this reason it is hoped that this important document will be of importance and use to all those concerned with the pressing problem of providing an orderly and just system of access to higher education.

James A. Perkins, *Chairman*
International Council for
Educational Development

INTRODUCTION

AT THE END of the 1950s and beginning of the 1960s, many people were coming to believe that the low numbers of university students and people with the *Abitur** qualification for higher education were creating a situation in which the Federal Republic of Germany would no longer be able to hold its own in international competition. People thought that the "American Challenge" and later the "Japanese Challenge" could not be met, and that West Germany was in danger of becoming a *Lizenznehmerland,* a nation which leased patents on inventions developed elsewhere. There was great anxiety over a technological gap which was thought to be developing in Germany. As a means of warding off such dangers, some thought that a drastic increase in the numbers of secondary school graduates was immediately necessary. This required discovery of "talent reserves" in predominantly Catholic areas and in rural areas, among the children of workers and farmers.

In this context reference was made to studies by E.F. Denison (*The Sources of Economic Growth in the United States and the Alternative Development,* New York 1962) and T.W. Schulz (*Education and Economic Growth,* Chicago 1962). It was above all Denison who believed that the growth of the U.S. economy in the twentieth century was determined only 40% by labor and capital, whereas 60% was traceable to research and new technologies, to education and training, and to modern management. It would take pages just to list the places where this insight has been used by public figures from the fields of science, educational policy, politics and public administration to argue for the need to invest in primary education, higher education, research, and technology.

*Definition of terms is found in Part I.

The old Marxian phrase "knowledge is a productive force" (Karl Marx, *Grundriss der Kritik der politischen Okonomie*) was rediscovered and treated in a series of writings by leading German social scientists (Habermas, Schelsky, et al.). The situation was similar outside of Germany. OECD published a series of papers emphasizing the relationship between economic growth and investment in schools, higher education, and research. The European Conference of Ministers of Education mentioned this topic in almost every one of its resolutions during the 1960s. All were sure that only an enormous effort in the educational sphere could guarantee economic growth.

Parallel to this argument which proceeds from a growth-oriented approach to educational policy, there has been an educational-sociological school which has attacked the traditional educational system as socially unjust. This school opposed placing too much emphasis on talent as hereditary; instead, it held that differences in educational levels and social barriers to education were responsible for the unequal distribution of "talent." There was a demand for remedial measures in kindergarten and primary schools, in order to break down class barriers—especially those having to do with language skills. There was demand for a school system which paid more attention to individual aptitudes; the *Gymnasium* should be done away with or at least changed. This also meant a departure from the assumption supporting the *Gymnasium,* namely, that the only pupils ripe for higher education are those who can speak at least two foreign languages, have mastered higher mathematics, have knowledge of chemistry, physics, and biology, and especially know the literature, culture and history of their own country.

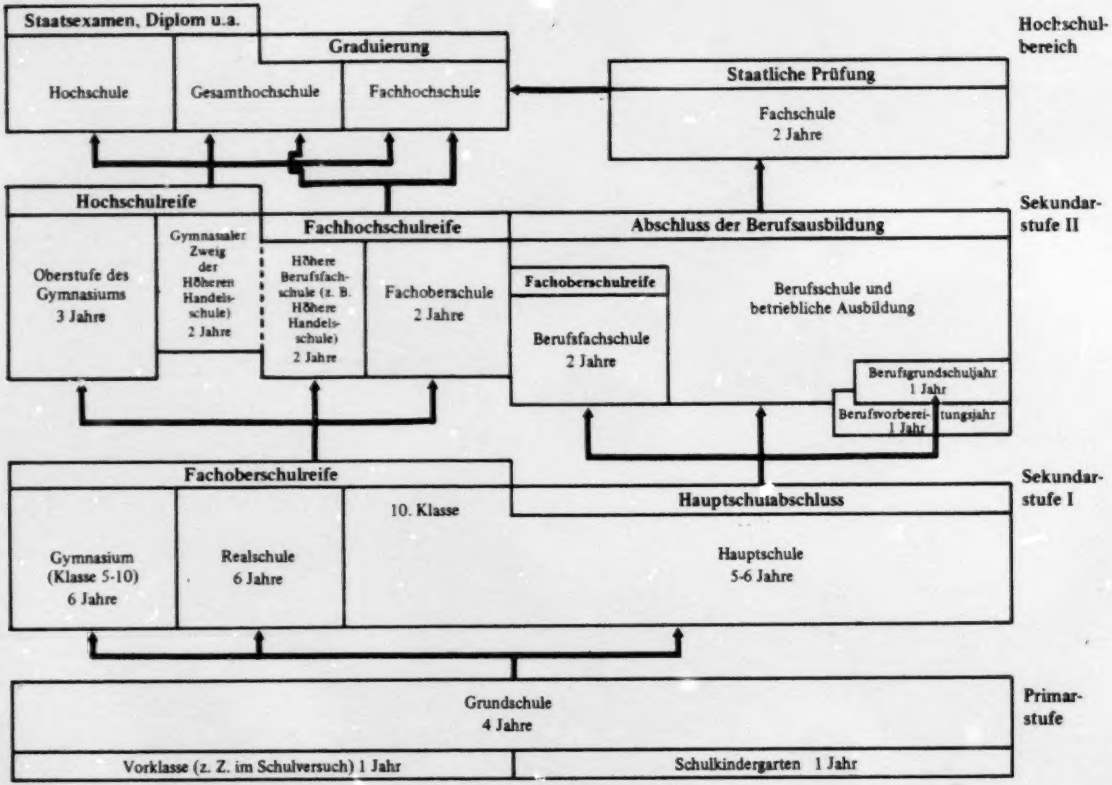
The alternative suggested was a more diversified system of secondary education which would add to the concentrations in classical languages, modern languages, or the natural sciences. There would also have to be concentrations in the arts, the social sciences, and technical subjects, in order to do justice to the corresponding specific aptitudes in pupils. Thus: differentiation of the school system, individualization of the curriculum, and flexibility in standards. This last meant that there could no longer be a strict separation between the various types of schools (*Volksschule, Realschule, Gymnasium*); one should be able to

transfer from one type to another, thus avoiding "dead ends" and "one-way streets" and enabling pupils to reach higher education by different routes.

With technical *Fachoberschulen*, one hoped to secure a chance for pupils with practical aptitudes. This was connected with the demand for setting up a new type of institution of higher education, one that would emphasize practical training more than the universities do: this was the *Fachhochschule*, which was designed primarily to serve the graduates of *Fachoberschulen*. Such reform measures were supposed to equalize chances for employment, and eventually lead to social equality.

The States of the Federal Republic, which according to the Constitution have jurisdiction over the educational system, were not deaf to all these far-reaching arguments and demands. Following the theory connecting higher education with economic growth, in the Standing Conference of State Ministers of Education, Science, and Cultural Affairs, measures were taken to increase the numbers of pupils admitted to study at universities. The educational-sociological position was also heeded; attempts were made to remove arbitrary barriers to admissions. The curricula of the *Gymnasien* were reformed, and the number of required subjects was reduced (Saarbrucken and Stuttgart Agreements of the Standing Conference, 1960 and 1961). In 1964, new secondary school types were added to the traditional three *Gymnasium* streams. The possibilities for moving from one school type to another, e.g. from *Realschule* to *Aufbaugymnasium*, were drastically increased; the *Fachoberschule* and the *Fachhochschule* were introduced in 1968.

In addition, a pupil with the *Fachhochschulreife* qualification may attend the *Fachhochschule* without having obtained the *Abitur*. Graduates of these *Fachhochschulen* may go on to attend the university—and in any field, not just the ones that they have begun at the *Fachhochschule*; thus, with graduation from the *Fachhochschule*, one receives the general higher education qualification. In some states of the Federal Republic, students who have completed the basic level at the *Fachhochschule* (3 semesters) may transfer to the university; however, they then must continue studying in a discipline identical or related to the one they have begun at the *Fachhochschule*.


Staatsexamen, Diplom u.a.
Graduierung
Hochschule
Gesamthochschule
Fachhochschule
Staatliche Prüfung
Fachschule
2 Jahre
Hochschulbereich
Hochschulreife
Oberstufe des Gymnasiums
3 Jahre
Gymnasialer Zweig der Höheren Handelsschule)
2 Jahre
Fachhochschulreife
Höhere Berufsfachschule (z. B. Höhere Handelsschule)
2 Jahre
Fachoberschule
2 Jahre
Abschluss der Berufsausbildung
Fachoberschulreife
Berufsfachschule
2 Jahre
Berufsschule und betriebliche Ausbildung
Berufsgrundschuljahr
1 Jahr
Berufsvorbereitungsjahr
1 Jahr
Sekundarstufe II
Fachoberschulreife
Gymnasium
(Klasse 5-10)
6 Jahre
Realschule
6 Jahre
10. Klasse
Hauptschulabschluss
Hauptschule
5-6 Jahre
Sekundarstufe I
Grundschule
4 Jahre
Vorklasse (z. Z. im Schulversuch) 1 Jahr
Schulkindergarten 1 Jahr
Primarstufe

A look at the resolutions of the Conference of Ministers from 1968 to 1970 shows the extent of these measures: they have significantly altered the appearance of the West German educational system. The table reproduced on the facing page, which depicts the educational system in Nordrhein-Westfalen, shows the general structure employed in all eleven states of the Federal Republic.

A content-oriented structural reform was only carried through to a limited extent. Most of the measures were carried out under the slogan "more of the same" (Werner Spiess); now broad sections of the population were supposed to be granted the privileges which formerly were the sole province of a small elite. One fact must be recognized, since it is decisive to the German system of higher education: higher degrees mean not only a higher income or more status and prestige; they are also the ticket to the civil service system, with its relatively rigid criteria for promotion.

The consequences of these changes were the following: an increase in the number of pupils going on to the *Gymnasium* from primary school (*Grundschule*); an increase in the number of pupils who stay in the *Gymnasium* until the *Abitur* (c.70% today); and thus a rapid increase in the numbers of pupils with the *Abitur* qualification for higher education.

Meanwhile, a more sober mood has prevailed; it is evident that all these measures have not brought the desired results. Today it is clear (based on the so-called Brooks Report of the OECD in 1971) that the thesis about the dependence of economic growth on the extent of investment in education, science and technology hardly enjoys even the status of a scientific hypothesis, that it has not gone beyond the level of mere plausibility, and that it has not been verified empirically. There have been numerous economic studies in many countries which point out the questionable aspects of the arguments advanced by Denison and Schulz. Today neither the OECD nor the European Conference of Educational Ministers accepts the economic growth approach to educational policy which was embraced for almost ten years. The same goes for the optimistic view that equal chances in the educational system will bring about more social equality. It

became clear even before Christopher Jencks' book, *Equal Opportunity*, that the opposite is more likely to be the case: that more social equality gives rise to better chances for higher education.

Expansion in the educational sector is an international phenomenon. We know that there are complex processes affecting this expansion, ones which sociologists would call "self-fulfilling prophecies." A statement made at the beginning of a study by the OECD (*Recurrent Education*, CERI, Paris 1973) is valid for many countries, whether highly developed or underdeveloped, including the Federal Republic of Germany: "At the present time, the increased numbers of students in the postsecondary educational sector is the key problem confronting educational policy makers in many OECD member nations." But the increase in student numbers is not the only factor contributing to the increasing instability of the system of higher education in Germany. There is a series of specifically German conditions which exacerbate the situation.

I

INCREASING INSTABILITY OF THE SYSTEM OF HIGHER EDUCATION

THE DIFFERENCE between access to higher education and admission to a university is basic and far-reaching. The present discussion in Germany suffers much from a confusion of the two terms.

One can understand the terms only when one realizes that institutions of higher education in West Germany are almost exclusively set up and financed by the state, and thus are public institutions. The small number run by the churches, including seminaries, must be recognized by the state. It is true that private institutions of higher education are permitted, but their number is quite insignificant, and they too must be recognized by the state if their examinations and degrees are to mean anything professionally. This is a point where the Federal Republic of Germany differs radically from the United States.

Hochschulreife is a qualification recognized by the state upon completion of an examination; it entitles a person to study at a university. There is a general qualification, and one for a specific field of study. The first allows one to study in any faculty of an institution of higher education, while the second permits one to enroll only in certain specified disciplines. There is also the *Fachhochschule* qualification, which entitles one to study only at a *Fachhochschule* rather than a university.

The general and specific qualifications are obtained by means of the *Abitur*, by graduation from a *Fachhochschule*, and in certain special cases by means of aptitude testing. The *Fachhochschule* qualification does not suppose 13 years of schooling, as does the *Abitur*, but rather 12 years, the last two of which can be spent at an institution such as a *Fachoberschule*.

It is important to realize that anyone possessing the *Hochschulreife* has a right to study which is protected by the Basic Law. The well-known decision of the Federal Constitutional Court of July 18, 1972 calls this "a right to use public higher education facilities." Thus the Constitutional Court interprets

this right as a legal claim (as long as the formal qualification, i.e., the *Hochschulreife,* is present) rather than a freedom defined negatively, one which protects the citizen from attempts to interfere with its exercise.

From the legal character of such a claim, the Constitutional Court also concludes that essentially every possessor of the higher education qualification must *also* be accepted in his chosen discipline by a university. The state does not have the right to accept or reject candidates for admission. So that the right of access may be exercised through the applicant's free choice, the state must construct universities that will have the facilities to satisfy every qualified person. Only in cases where unlimited development would endanger the financing of other social projects (health care system, defense, highway construction, social security and so on) may limitations be imposed on university construction. If the number of applicants to a field of study exceeds that of available places, then a right of admission may be introduced to limit the right of access (*Numerus clausus*). This right of admission must be based on criteria which can be verified by the courts: above all it must take performance in secondary school into consideration when admissions decisions are made, and it must in principle insure, through writing, that every person with the higher education qualification has a chance to study. In accordance with this decision, the states entered into an agreement concerning the assignment of study places on October 20, 1972, and set up a central admissions agency in Dortmund (the ZVS). The provisions of this agreement have been frequently criticized. The main points at issue have been the grades on the *Abitur* and their objectivity, problems involved in measuring performance, and the waiting periods for admission which are becoming longer and longer.

In discussions centering around these matters, in proposals and criticism, right to access and right to admission are generally confused. Does one wish to reduce the burgeoning possibilities for attaining the qualification for *access* to higher education, and thus the number of people with this qualification, in order to match the number of qualified applicants with the number of available places in a given field of study? Or does one wish only

to change regulations governing *admission,* i.e., to improve the procedure used in the selection from among those with the higher education qualification (the *Numerus clausus* procedure of the ZVS)?

If the number of people with the higher education qualification is reduced, this amounts to turning back the clock of educational policy and doing away with many popular policy decisions of the last ten years, including differentiation and individualization of curricula, an increased range of choices, and greater accessibility. The same thing can be accomplished by setting up a whole new system to confer the higher education qualification. In any case, the number of people with the higher education qualification, primarily those with the *Abitur,* would be reduced.

If one changes only the admissions procedure (e.g., by the introduction of testing), in order to achieve more fairness, objectivity, and economy, then one must be aware that in the next decade tens of thousands of people, who in principle possess the higher education qualification, will not receive a place. For even the best admissions procedure does not create one additional study place; from a psychological point of view, any change in the admissions procedure (even the best change) only redistributes the frustration: someone who was previously denied admission will now be admitted, while someone else who would now be admitted under the current regulations will be turned away.

Increase in Numbers of People with Higher Education Qualification

The Federal Republic of Germany is only at the beginning of its problems with the *Numerus clausus.*

As of January 1, 1972, the population of the Federal Republic was 61,503,000. It is predicted that the population as of January 1, 1985 will be 59,698,000.

The birth rate has dropped since 1967.

In 1966, the number of people 0-1 year old was 1,027,000. In 1970 the figure was only 785,000, in 1975 640,000, and in 1980 it will be about 630,000.

The increasing tendency after 1980 need not concern us here: people born after that date will not have attained the higher

education qualification before 1998-2000. However, the falling birth rate will begin to have effect from 1986 on, so the problems will come in the next ten to twelve years.

Of those who possess the higher education qualification, roughly 93 to 94% wish to make use of their right to study at a university.

If one now considers that c. 65 to 70% of those who enter the *Gymnasium* (in the fifth grade) will also take the *Abitur* (in the 13th grade), that the possibilities for obtaining the higher education qualification outside of the *Gymnasium* have increased, and that the increasing birth rate up to 1966 is beginning to have its effects, then we reach the following figures:

a. Number of people with the higher education qualification:

1978	236,700
1980	259,000
1985	315,000
1990	233,000

b. Estimated numbers of people entering the universities: 93% of those with the qualification indicated under **a.**

c. Actual numbers of people entering the universities (people attaining the higher education qualification in a given year, plus repeat applicants turned away in previous years) corresponding to available study places and with the universities operating beyond capacity:

1978	188,700
1980	244,000
1985	297,000
1990	220,000

These are the numbers which can be admitted under the *Numerus clausus* procedure, assuming that the economic situation allows for further expansion of the university system as presently planned.

d. Estimated numbers of students, based on the estimated numbers of beginners (**b** above), and considering the average period of time currently spent at the university:

1980	1,267,000
1985	1,715,000
1990	1,604,000

Comparing the number of people with the higher education qualification (**a**) with the number of people actually admitted (**c**), and considering that roughly 50% of those denied admission in a previous year will apply again, we find that 69,000 people will be denied admission in 1978. Proceeding further, we find that in 1980 we shall have about 80,000 people permanently denied admission to a university; this figure then increases until 1986. Since rejected applicants stream into fields of study where the *Numerus clausus* has not yet been applied (c. 20% of fields of study in 1975), these fields will soon have the *Numerus clausus* as well: then the *Numerus clausus* will be applied to *every* field of study. This will be the case by 1978.

Development and Capacity in Higher Education

Long-term expansion goals in higher education (that is, until 1985) are laid out in the comprehensive educational plan formulated in 1973 by the Federal-State Commission. According to the Higher Education Furthering Act, the task of the framing plans is to quantify higher education expansion through the interpolation of data in the comprehensive educational plan. The framing plans determine the number of study places by calculations of space: in the humanistic disciplines at universities and comprehensive institutions of higher education, the area per student is 4-4.5 square meters, while in *Fachhochschulen* it is 4 square meters; in natural sciences and engineering at universities and comprehensive institutions, it is 15-18 square meters, and 12 square meters at *Fachhochschulen*; in all disciplines at teacher training institutions, each student counts for 5.4 square meters. These are raw figures which take into consideration neither the type of educational activity engaged in nor the concentrations of teaching and research activity at different institutions; they also say nothing specific about individual disciplines. The most important point is that they do not calculate in human terms, based on the type and quantity of personnel needed in a given discipline. The same holds for the projected numbers of students. These are extrapolations from demographic trends observed in the past. I mention this lest anyone place too much confidence in these figures. However, it is probable that the

figures for numbers of students will actually be higher than predicted, rather than lower.

The Fifth Framing Plan is currently concerned with the years 1976-79. It provides that by 1979 the States and the Federal Government should reach a figure of c. 820,720 study places. These would be distributed as follows, without regard for the type of institution of higher education involved: 40.8% for humanistic disciplines, 34.9% for natural sciences and engineering, 21.5% for social sciences, and 2.8% for artistic disciplines. If this figure is attained, then in 1979 roughly 941,000 students could study in these 820,720 places. This means a general occupation quota of c. 115%, or, to put it differently, an overoccupation quota of 15%. By interpolation of the numbers of beginning students foreseen for 1975-78 in the comprehensive educational plan, the Fifth Framing Plan assumes that there will be 198,100 beginners in 1979. This amounts to c. 22% of the age group of those 19-21.

If the figure of 820,720 places is to be reached by 1979, then c. 188,000 places must be created between 1976 and 1979. Not only would this reach the limits of construction capacity, but it would also put a tremendous strain on the budget. During the period of the Fifth Framing Plan (1976-79), 14.7 billion Marks (c. $5.8 billion) must be found for university construction. Already there are sigrificant differences of opinion between economists and educational planners as to whether this can be accomplished, considering the current economic stagnation and the concomitant drop in tax revenue.

Let us assume that the construction industry and government finances are able to reach the goal of 820,720 places by 1979, and an occupation quota of c. 15% is still accepted. Even then, the 941,100 students will be absorbed by the universities only if the length of a period of study does not continue to increase (current average periods: university, 6.6 years; teacher training school, 4.4; schools of art, music, and athletic training, 4.5; *Fachhochschule*, 3.5). If the period of study increases until 1979, then the figure 941,100 must be reduced so that the occupation quota does not exceed 115%; or the overoccupation quota would have to be increased considerably. In the latter

case, we have to consider how much facilities can be overtaxed before the university will cease to function.

In university planning, the term "university capacity" or simply "capacity" is often used in place of the term "study places." The use of this term in planning leads to confusion with the same word as employed in the *Numerus clausus* procedure. If a given field of study becomes part of the *Numerus clausus* procedure, then the university must determine "capacity" for this field. This training capacity refers to beginning students. It may be defined as the number of students who, under certain conditions and utilizing available means, can be trained in a given field. The procedure by which this capacity is determined must indeed be unique in all the world. It is understandable that critics regard it as an expression of typically German perfectionism and legalistic ways of thinking. On the other hand, it must be conceded that it is precisely this procedure which saves the universities from being inundated with students.

The two essential factors influencing capacity are personnel and space. In principle it should be possible to take them into account simultaneously in capacity calculation. However, this is impractical because of the amount of computation involved, so the usual procedure is carried out in stages: first, capacity is figured on the basis of available personnel, and the result of this calculation is then checked against considerations of space.

The principle of capacity determination (not the mathematical computation procedure) is based on the following considerations: a teaching unit (department, institute, etc.) offers a given number of courses, which are in demand by a given number of students from various departments. Course offerings are determined by the number of teaching positions at hand plus the teaching load for the people holding these positions. Demand for courses is the product of the number of courses necessary in a semester times the number of sections required. The number of sections is important because courses with limitations on the number of participants must be divided up. This section number is the quotient of the overall number of students in the course divided by the size of each section. When the number of curricular offerings (teaching positions times teaching load) and the

other conditions (number of courses and section size) have been set, then capacity may be determined. In addition, we shall now enumerate some further details involved in capacity calculation, because they amount to a refinement of this basic formula:

Different types of teaching positions must be considered, because the teaching load varies according to rank.

Courses with unlimited participation (lectures) are not calculated as part of demand, but rather subtracted from the total number of courses offered. This is because in general there is no set number of students foreseen for lectures.

Only those courses are considered which the student takes "in his field." Other courses, e.g., mathematics for students of physics, are treated as so-called "service courses" and not calculated in departmental capacity.

The demand for courses varies within a given field according to the degree which students are seeking (e.g., diploma or teaching certification). Therefore demand is determined separately.

Different types of courses demand different degrees of preparation on the part of teachers. Thus courses are weighted.

Different types of courses involve varying sizes of participation groups; this requires differentiation in capacity calculation.

Political Dangers for the Universities Caused by a Stricter Application of *Numerus Clausus*

German universities have never looked at themselves scientifically; they have never made themselves the object of their own research. Thus there are relatively few studies which treat the problems of access and admission to higher education at least halfway scientifically. Although numerous individual studies touch on various aspects of the problems, there are no comprehensive systems analyses on the higher education admissions procedure, nor are there any really convincing psychological studies on the problems involved in grading, the prognosis value of grades, or the correlation between success in school and in a career. We also lack a legal study dealing with the *Numerus clausus* decision, one which takes issue with the postulated individual claim to the use of higher education facilities (Article 12) while discussing the tension between individual and society. There is, finally, a dearth of economic research on the question

of supply and demand for higher education; all the work done so far in this area has been methodologically insufficient.

Therefore, because of the lack of a scientific basis, the discussion of access and admission to higher education will continue to be conducted with nonscientific or prescientific explanations. Hence its political relevance.

In this context, it is probable that the current admissions procedure will be attacked from three directions.

1. Attacks from those permanently excluded

Those with the *Abitur* charge that Article 3 of the Constitution, which guarantees equality, is being violated in favor of graduates of the *Fachoberschulen.* At the moment the latter have better chances for admission to a university by way of the *Fachhochschule* because the grading system there is more favorable than in the *Gymnasium,* thus providing an advantage in the ZVS admissions procedure.

There are also attacks by those rejected (or by their parents) against those students admitted; it is maintained that the students, through laziness, the misuse of academic privileges, or the fear of going out and earning a living, do not perform well enough at the university. This supposedly lengthens the time students take to complete their courses of study, thus depriving others of the chance to attend the university. These complaints are often coupled with reproaches against society for its general decrease in performance, and they exist alongside rigid conceptions of order. With a tendency to reduce highly complicated objective problems to moral postulates, the recipe is usually: strict discipline at the universities, expulsion of "lazy" students, permanent attrition by examinations. Of course this position also maintains that the universities are in a state of chaos.

2. The universities employ two lines of attack in particular

a. With the expansion of the right of admission to include roughly 40 possibilities and approximately 200 forms of certification (compared with the situation until 1960 when the *Abitur* could be obtained only at the three types of *Gymnasium*), it is supposedly impossible to ensure that beginning students meet

basic academic standards for admission. A consequence is that the university is forced to take over more and more remedial functions; thus the time spent at the university is increased, depriving more applicants of their chances. This also leads to greater expenditures for space and personnel.

Since economic stagnation causes a decrease in public funds, the universities supposedly have to use their resources in remedial activities, which leads to a neglect of research. This in turn is thought to diminish Germany's capacity to hold its own in international scientific and economic competition. Here too, highly complicated social, economic and organizational questions are reduced to a moral problem of professional self-interest (the value of science *per se*).

b. Expanding the social basis for student recruitment supposedly leads to a reduction in educational performance. The mass university means a loss of excellence (more means worse); unqualified people would gain access to the university. The recommended solution: a return to the old method of strict selection of applicants.

Both arguments demonstrate a fear of "proletarianization," which as a rule is coupled with elitist conceptions of education.

3. Attacks from graduates already established in careers

Already established university graduates continue to enjoy high incomes and a high level of social prestige. The large numbers of university graduates to be expected in the near future give rise to the specter of the "academic proletariat." Even the choice of words signals once again the anxiety about "proletarianization." Indeed, if conceptions of social prestige (the academician), income expectations, and status career conceptions persist, then in the next ten years we can expect a significant oversupply of academically trained people. However, if one opposes to this an altered conception of social prestige, lowered income expectations, and a broader and more practical postsecondary training (curriculum reform, career fields rather than fixed career slots), then it will be a long time before we can really speak of an "overproduction" of university graduates.

Politicians and administrators are made uneasy by these attacks, due variously to the lack of scientific argumentation, the influence of the people involved (the prestige of university professors), and the radical basis of the arguments advanced by those rejected from the universities. The universities face the danger that the problem will be solved politically simply by squeezing as many applicants as possible into the universities, without regard to the number of places actually available. This would greatly endanger research at the universities, and thus the quality of teaching and scientific activity in Germany. The present situation in the labor market presents a further temptation to implement such political solutions; every secondary school pupil who does not go on to the university potentially increases the army of unemployed young people. Hence the demands for the abolition of the *Numerus clausus* together with an increase of the overoccupation quota from c. 15% until 1985, i.e., until the "natural" decrease in the numbers of students. Put crudely, this would mean that all those applicants with the higher education qualification would be admitted to the universities.

The Labor Market and the Surplus of People Entering It

At the end of 1975, the Institute for Labor Market and Employment Research of the Federal Labor Agency in Nuremburg carried out investigations on the "Capacity of the Career Training System for Absorbing Transfers from the General School System up to 1990." These investigations show that on the basis of educational planning to date and a continuation of current developmental trends, there will be an alarming crisis in training capacity within the next decade. The cause for this is a "demographic wave," a "mountain of pupils" following from the "mountain of births" between 1953 and 1966, which will come into contact with the limited capacity of the educational system.

Even if 10% of those leaving general educational institutions decide not to seek qualification in a trade, the calculations of experts in labor market and employment research show that in 1981 there will be a shortage of 189,000 places for training in trades.

At the beginning of the 1960s, the number of people leaving general educational institutions was c. 700,000; in 1974 the figure rose to c. 800,000, and remained there for two years because of the shortening of the school year. The number will rise dramatically to a maximum of 960,000 in 1982, after which it will recede just as quickly.

Research shows that as long as the slowdown in educational expansion, evident since c. 1974, remains in effect, those born between the mid 1950s and the end of the 1960s will in general have less chance for career training than the generations coming before or after.

The rapid reduction in the number of school leavers in the late 1980s and the 1990s would then assure everyone broad options in career training, even if training capacity were to remain the same as it is at present.

According to the calculations of researchers, those pupils with diminished chances are the ones leaving school between 1977 and 1987. For pupils of the *Hauptschule*, this involves people born between 1962 and 1972; for pupils of the *Realschule*, the years involved are 1960-1970; and for *Gymnasium* pupils 1957-1967. Investigations show the following developments for this generation:

The expansion capacity of universities will not be extended beyond 850,000 study places. In 1975 there were 185,000 beginning students, at least a third of whom entered the university by means other than the *Abitur* at the *Gymnasium*. In the 1980s, the capacity of the universities for accepting *Gymnasium* graduates will reach a maximum figure of 140,000 yearly, compared with 110,000 today.

Currently there are a maximum of 470,000 training places for industrial work and public service. Here it is assumed that the critical generation will be served by a yearly capacity of 400,000 training places.

For full-time job training programs, an area very difficult to investigate because of the vast number of different individual programs involved, it is estimated that the current number of 250,000 training places will increase to 280,000 places for beginners by the early 1980s. Assuming, in line with the present practice, that c. 50% of these places will be occupied by pupils

from the trade school system, from 1980 on there will be only 140,000 places here for pupils leaving general educational institutions each year.

Pupils leaving the general educational system who do not fit into any of the three categories outlined above will become either unskilled workers, unemployed, or "people with no training and no means of support." Crowding in universities and in full-time trade school programs (where there are procedures similar to the *Numerus clausus*) will, according to the Institute, lead to a situation where increasing numbers of people with the *Abitur* and graduates of the *Realschule* will stream at least into the more prestigious on the job training slots in industry, thus depriving a large share of less qualified *Hauptschule* graduates of places.

There are no other relevant developments worth considering. Training capacity at the newly established "job training academies," for example, may be ignored because of the very small numbers of people involved.

The processes involved in this insufficiency of training places, which is an international phenomenon, could lead, according to expert opinion, to a blockage of applicants—similar to that currently observable at the gates of the universities—which could push the imbalance ahead a few years into the 1990s. The consequences of these waiting lists would be that late bloomers would have to endure periods of inactivity before entering the labor force, and that they would be disadvantaged because they would be starting out relatively late to compete for jobs and advancement. Youths who start out as laborers, even if there are eventual improvements in the training system, would be difficult to retrain for better positions later on.

It is more probable that there will be a ranking of applicants on the basis of the level of secondary school qualification. This means that all pupils with the *Abitur* would receive some training: some would enter the universities; the rest would receive the more interesting training places in industry or trade schools. Pupils from the *Realschule* would also receive places, either in industry or the trade schools. Then the remaining places would be offered to the best pupils of the *Hauptschule*.

The general gap in training places would amount above all to a lack of chances for those school leavers below the first rank in the *Hauptschule* and the *Sonderschule*. *Sonderschulen* are secondary schools available to pupils who have not qualified for the *Hauptschule*. Graduates may enter the *Fachhochschule* and after program enter the university. This route takes about two years longer than the *Hauptschule*-university progression.

By 1982, not even half of the pupils finishing the *Haupt-* or *Sonderschule* and seeking a trade qualification would find a training place. In the long run every person with the *Abitur* who was denied admission to a university would create one more graduate of the *Haupt-* or *Sonderschule* with no chances at all.

The investigation of the Institute ends with the proposal that this crisis be defused by doing away with the *Numerus clausus*. The Institute would introduce an overoccupation quota of c. 25% for the universities for the years until 1986, instead of the current 15%. Such an overoccupation quota would reduce the number of young people with reduced chances during this period by about 300,000, leaving about 1.1 million unsatisfied. Thus the danger of a desperate political move discussed earlier is here made into a definite proposal.

Total *Numerus Clausus* Effects on Education

Even if the overoccupation quota is not raised, the universities face increasingly serious problems from the admissions procedure. These problems have nothing to do with the will of the people involved. Rather, they have their basis in the nature of the *Numerus clausus* procedure, where the problems have been elevated to the level of a system. In order to stimulate those responsible to rectify the situation, the author, together with Ulrich Giebeler, has presented the dangers involved in detail (Willi Becker and Ulrich Giebeler, "Fehlsteuerungen im Hochschulbereich durch das Verfahren nach dem Staatsvertrag uber die Vergabe von Studienplatzen in der Phase des totalen Numerus clausus" ("Mistaken Developments in Higher Education Caused by the State Agreement on the Assignment of Study Places during the Phase of the Total Numerus clausus"), in: *Vierteljahreszeitschrift für Wissenschaftsrecht, Wissenschaftsverwaltung, Wissen-*

schaftsforderung, Tubingen, Vol. 8, No. 2/1975, pp. 105-127). Some brief remarks should suffice here.

A centralized procedure for the assignment of study places (such as the ZVS procedure) always leads to important reciprocal effects on educational policy within the system of higher education. Any such procedure must start with the assumption that all fields of study with the same name at all universities are identical. The current procedure, which distributes applicants among the various universities on the basis of criteria which have nothing to do with their performance, must assume that all the universities taking part in the procedure are of the same type and quality. The system ignores the formation of different schools of thought and different areas of emphasis in teaching and research at individual institutions. It allows the applicant *de facto* no possibility to choose freely among the various universities, since a limitation on the preferences which may be indicated makes for an extraordinary reduction in the chances for admission, no matter what the level of individual aptitude or performance may be. The system takes no notice of experiments and models for the reform of courses of study; it simply assigns study places blindly.

The mass pressure for university education demands the standardization of courses of study at all universities. The increasing applicant surplus requires that teaching capacity at the universities be exploited to an exhaustive degree. Capacity calculation, in order to comply with the order of the Federal Constitutional Court that facilities everywhere be utilized equally, has to work with rigid computational factors such as section size. Reform models and experimental courses of study require a greater expenditure of personnel than those which have already been "broken in." The discussion of whether it is desirable or possible to continue the one-stage training program for lawyers at the University of Bielefeld is the first indication of possible stagnation.

Room for innovation will be even further reduced at the universities if increasing numbers of applicants, reduced financial resources and personnel cutbacks create a situation where the data gleaned in capacity calculation, which according to the

Numerus clausus ruling is to be applied only to emergency capacity over a relatively short period, is made to form the basis for future development plans. In view of the threatening situation, ministers of finance may employ the slogan "university efficiency" and treat emergency capacity as normal capacity. If this happens, then the necessary leeway for the development and trying out of curricular and didactic innovations will no longer be available; the energies of teaching personnel will be employed wholly in maintaining the standard course offerings. Since models for the reform of courses of study may not be carried out to the detriment of teaching performance at the universities, then such reforms can only be realized at the cost of research. This means, however, that reforms will in many cases no longer be viable at all. Political pressure on institutions involved in academic reform will increase, since with increasing numbers of people being permanently denied admission, the argument will be employed that this is not the time for the government to allow the employment of personnel resources in experimentation with reform models such as highly standardized six-semester courses of study, similar to U.S. colleges. The best graduates, and only these, would then have the right to continue at the university for four more semesters.

There is also instability on the part of the clients of the university. On the one hand, the German labor market is characterized by structural unemployment, especially of young people (automation, saturation of some areas of the economy, etc.), which is unusually visible in the current recession. On the other hand, there is a rigid career pattern for highly qualified personnel, i.e., graduates of universities. Once one has passed certain examinations, then one can enter the civil service as a teacher, an administrative official, a judge, a district attorney, and so on. Such positions have prestige, social security, relatively high pay, and one cannot be fired from them. More than 50% of all university graduates enter the civil service. The private sector has similar structures, which have in fact been borrowed from the civil service; this is true in all cases except for top management. Thus anyone with the higher education qualification has a strong

incentive to embark on a course of study at a university. However, the labor market cannot absorb all university graduates and there is a lack of more elastic structures which would diminish the tremendous attraction of a university degree, as well as provide broader opportunities (though with lower incomes) for those who possess such degrees. Furthermore, these new structures are not likely to appear: the influence of interest groups (teachers unions, civil service officials unions, among others) is so great that the necessary radical measures cannot be expected.

No one seems to understand that there is a natural, irreconcilable opposition between justice and practicality. He who demands that the procedure be made more just and more practical at the same time is wishing for something which is simply impossible. The more fair a procedure becomes, that is, the more it considers individual cases or categories of individual cases, the more casuistically it must operate, and the more complicated it gets. The simpler it becomes, and the more practical, the more the standard of the greatest possible fairness recedes into the background. The two interests cannot be combined—but this is precisely what the public wants.

II

CHANGES IN CURRENT LAWS GOVERNING ACCESS AND ADMISSION

THE PROCEDURE provided for in the "State Agreement on the Assignment of Study Places" has come in for sharp criticism from the very beginning. Such criticism overlooks many factors:

1. That the Federal Constitution has made certain conditions which must be met by *any* admissions procedure;

2. That even the best admissions procedure does not create one new study place;

3. That increased fairness demands at the same time more casuistry in the admissions procedure, making it less practical and more unwieldy; in the long run such a procedure would be even more unjust than the one currently employed;

4. That any admissions procedure must be technically viable, i.e., it must employ computerized methods.

Once the ZVS has determined that the total number of applicants for a field of study (first through eighth choices) is larger than the overall capacity of the universities for this field, it selects as many applicants for a given field of study as there are places in that field; then these applicants are distributed among the various universities.

The following lists are set up for the selection of applicants:

—a list according to "Aptitude and Achievement;"

—a list according to the waiting period;

—a list of recognized "hardship cases;"

—a list of those with "preference for admission" (those applicants who had been admitted earlier but were not able to matriculate due to military service and those whom a court has directed be admitted.

All applicants are put on the lists according to "Aptitude and Achievement" and "Waiting Period." Except for special cases, applicants who have received the higher education qualification more than eight years before application are put at the end of the waiting list.

Each applicant must be assigned a specific slot on the individual ranking lists. However, since in many cases applicants would have an identical position on the lists, further criteria must be employed. The stated preferences of applicants who have indicated the field of study as their first through eighth choice plays an important part. All applicants who have indicated that the field is their first choice are put before those who have made it their second choice, and so on. The ranking lists of hardship cases and those with preference for admission contain only applicants' first choices.

The following criteria are employed to rank applicants on the various lists:

Achievement and Aptitude List:

- Average or comprehensive grade in the higher education qualification (*Abitur*, academic record at a *Fachhochschule* or another university, etc.);
- Proven completion of military service or at least two years as a "Development Aid" (analogous to the Peace Corps) or as a "Social Service Volunteer;"
- The year when the higher education qualification was obtained;
- Lottery number.

Waiting Period List:

- The year when the higher education qualification was obtained;
- Proven completion of military service or at least two years as a "Social Service Volunteer;"
- Average or comprehensive grade in the higher education qualification;
- Lottery number.

List of Recognized Hardship Cases:

- Degree of extraordinary hardship (determined by the university given as first choice in the application);
- Proven completion of military service or at least two years as a "Development Aid" or as a "Social Service Volunteer;"
- Lottery number.

A lottery number is assigned to each applicant at the beginning of the assignment procedure.

A certain share of study places are assigned to certain groups or according to certain selection criteria.

Eight per cent of available study places at a given university are reserved for foreign and stateless applicants. These places are assigned by the individual universities rather than by the ZVS.

Fifteen per cent of available study places are reserved for assignment according to hardship criteria.

The number of places remaining after the subtraction of the foreign and hardship quotas form the comprehensive quota, which is further broken up as follows: First, the number of applicants with preferred admission is subtracted. Of the remaining places, 60% are reserved for selection according to aptitude and achievement. The rest are reserved for selection according to the waiting period.

Any unused places from the foreign and hardship quotas are added to the comprehensive quota.

In order to avoid complex description, we have neglected to mention the special quotas in medicine, pharmacy, veterinary medicine, and dentistry for trainees in the public health service and officer candidates in the military service; the relevant authorities decide who shall be admitted within these special quotas, and communicate this information to the ZVS.

Assuming they have indicated a preference for a university on their applications, all applicants selected for admission to a given field of study are then included in the procedure for determining assignments to specific universities. A new ranking is set up for each university according to the following criteria:

1. The applicant's preference;
2. Significant reasons for an applicant's choice of a given university;
3. Lottery number.

Reasons for the choice of a specific university, especially those having to do with family situation and economic considerations, are treated in the following order:

1. The applicant is seriously handicapped physically as defined by law;

2. The applicant is married *and* lives with his family in the city where he wishes to attend the university. Unmarried, widowed, and divorced people with children are counted in this group;
3. The applicant has indicated on his application that he wishes his first choice to be given special consideration for reasons he has presented.
4. The applicant lives with his parents in the city where he wishes to attend the university;
5. The applicant lives alone in the city where he wishes to attend the university;
6. None of the criteria 1 through 5 applies to the applicant.

In criteria 2, 4, and 5, only the applicant's permanent residence is considered; this must be established by the presentation of the official residence permit. "Residence in the same location as the university" can also mean residence in the same district (*Kreis* or county) or in directly adjacent districts.

If a given field of study is not offered at a university where the applicant has his official residence, or in the near vicinity, the applicant's residence is considered to be in the district of the nearest university of the same state which does offer the relevant field of study. In this way, for each field of study, every university is assigned an area which it serves in the state where it is located.

The available places in each field at each university are assigned to admitted applicants according to the ranking criteria. If there are more admitted applicants with a first choice of a given field at a university than there are places available, spaces are filled according to the ranking list. Then the applicants who do not receive their first choices are assigned elsewhere.

A student may not be assigned to a university which he has not listed on his application, or where his desired field of study is not offered. If the student has not listed all the universities where his desired field is offered, and if he cannot be given a place at any of the universities which he *has* listed, then his acceptance must be withdrawn.

It is possible, however, for applicants seeking admission to a field of study to be terminated with the degrees *Diplom, Magister* (i.e., M.A.), *Promotion* or *Staatsexamen* (without teaching certification) to indicate whether they will accept admission to an institution which they have not expressly indicated on their applications. In such cases applicants who have been selected for the desired field of study will be assured of an assignment somewhere.

Timetable of ZVS Procedure

The ZVS assigns in the *main procedure* only those study places which have been indicated as first choices. Those applicants who have been admitted are required to inform the university within a set period of time (c. two weeks) of their intention to matriculate. Within four days after this deadline, the universities inform the ZVS of those applicants who have matriculated.

About one week later, the remaining places are assigned by the ZVS in the *first follow-up procedure.* Here a decision is made concerning applicants' second through eighth choices of a field of study. The matriculation period for applicants is now shorter (c. one week). Within four days after the deadline, the universities again inform the ZVS who have matriculated.

About ten days later, assuming that the follow-up lists for individual fields of study—up to the eighth choice—have not been exhausted, the ZVS then assigns any places still remaining in a *second follow-up procedure.*

If necessary, further follow-up procedures dealing with ever-decreasing numbers of people will be carried out manually by the ZVS.

In the follow-up procedures, only those applicants will be considered who, within a set time limit, have expressly informed the ZVS in writing that they are prepared to accept admission.

If applicants have been rejected in the main assignment procedure, a follow-up procedure *must* be carried out. If any assigned places are not occupied by admitted applicants, those applicants who were rejected have a *right* to be considered for them according to their place on the ranking lists. Therefore it may become necessary to carry out several follow-up procedures.

The central assignment procedure is completed
—when no follow-up procedure is necessary, or
—when the follow-up lists have been exhausted, or
—when all available study places have been assigned *and* occupied by matriculants, or
—when the ZVS declares that the assignment procedure has been completed.

The ZVS is *supposed* to declare the assignment procedure terminated when carrying out further follow-up procedures no longer appears feasible, either because of the very small number of available study places remaining, or because the semester has already begun (by May 31 at the latest for the Summer Semester, and by November 30 for the Winter Semester). (In Germany the approximate dates for the beginning of the semesters are April 15 for the Summer and October 15 for the Winter.)

The declaration by the ZVS that the procedure has been completed should allow the universities to then assign any still unoccupied study places as quickly and efficiently as possible to people who have applied directly to them. Assuming more people apply in this way than there are places remaining, assignments will be made by lottery. In such cases, the lottery will be applied first to those people who have been rejected by the ZVS.

Changes in Admissions Procedure Provided for in the Federal Higher Education Framing Law

The Basic Law (*Grundgesetz*) of the Federal Republic of Germany declares in Article 30 that the exercise of governmental powers and the fulfillment of governmental duties are to be carried out on the state level. This applies to the area of educational policy; thus one speaks of the sovereignty of the individual states in cultural matters. However, in May 1969 the Basic Law was amended (Article 75) to the extent that the Federal Government was conceded the right to create framing legislation for the development of the system of higher education. A Higher Education Framing Law was finally passed in 1975 by the *Bundestag* and the *Bundesrat* (the chamber representing the states). The law was promulgated in January 1976 to go into effect in the Winter Semester 1977-78; the states have until then to

adjust the State Contract on the Assignment of Study Places accordingly.

The basis of the new regulation is the division into a "General Selection Procedure" and a "Special Selection Procedure."

The "Special Selection Procedure" applies to all fields of study in which the "General Selection Procedure" would lead to too heavy demands on pupils taking the *Abitur*, or to unacceptably long waiting periods. Such fields are the so-called "hard fields" with the *Numerus clausus* such as medicine, dentistry, psychology, and pharmacy. To take an example: if the present demand for study places in medicine continues, then the only pupils admitted to the field will be those with the "dream score" of 1.0 (the highest possible score on a scale of 1 to 6) in the *Abitur*—and it is obvious that such a score alone tells us practically nothing about a pupil's aptitude for becoming a physician. Also, this demand for places in medicine means that the waiting period will become longer and longer (it is now seven years). (Lengthening the waiting period beyond eight years would be impossible, since the State Contract allows only for waiting periods up to eight years; anyone waiting longer is permanently excluded from consideration for a study place.) Legally speaking, lengthening the waiting period would cancel the Federal Constitutional Court's guarantee that every person with the higher education qualification shall have a chance to study (this is after all the reason for introducing waiting periods in the first place).

The admissions criteria in the Special Selection Procedure are the score on the *Abitur* (or in one of the other types of higher education qualification), plus a determination by testing and interview of aptitude related to the desired field of study.

The states are required to weight secondary school courses, i.e., to give special consideration in the comprehensive *Abitur* grade to those scores which can provide the best information about future success in a field of study at the university. If a pupil taking the *Abitur* wishes to go on to study physics, for example, then his scores in mathematics, physics, and chemistry are weighted. If these scores are especially good (c. 2.0 or 1.0), then weighting them will automatically raise the average *Abitur* score.

Very small differences in pupils' scores (e.g., between 1.7 and 1.8) will no longer determine ranking on the admissions list.

Of great significance to the General Selection Procedure is the introduction of a so-called "State Quota." There are no instruments that can objectify achievement measurement to the extent that secondary school examination scores become fully comparable. Efforts are being made by the states to set up unified standards for performance in the schools (so-called "books of norms"), but the evaluation of individual achievement has not been objectified, and a real comparison is impossible. Grades vary between individual classes in a given school, from school to school in a state, and from state to state—as well as from one type of *Gymnasium* to another. The State Contract provided that each state determine the average for its *Abitur* scores. The averages for the 11 states were combined to give an average for the whole country. A state whose own average was higher than the national average was assigned a minus factor (*malus*); likewise, a state with lower than average scores received a plus factor (*bonus*). This *bonus-malus-* procedure was the object of harsh criticism. Since the introduction of a weighted arithmetical mean demands that requirements for pupils, as well as the methods of grading them, are the same throughout a state, and since this cannot be done, the Higher Education Framing Law provides for the replacement of the *bonus-malus* procedure with state quotas. For each field of study included in the *Numerus clausus,* each state shall receive study places as determined by the number of people with the *Abitur* in that state and the proportion of these people in a given age group.

Especially important is the provision of the Higher Education Framing Law that time spent in one course of study at a university while waiting for admission to the field of study actually desired will no longer be considered as part of the waiting period (if the waiting periods are too long, the "Special Selection Procedure" is employed anyway). For example, it was up to now common practice for an applicant denied a place in the field of medicine to study chemistry or biology until he received a place in medicine by means of the waiting list. The consequence of this was that places were meanwhile denied to applicants who

really wanted to concentrate in biology or chemistry but who had slightly lower *Abitur* scores. This so-called "parking" at the university is no longer possible.

The Higher Education Framing Law allows the states to give favorable consideration to people on the waiting list who have taken up employment after the *Abitur* or who have obtained certification in some trade or profession before or after the *Abitur.* The states are skeptical about making use of this possibility. They do look favorably upon people with the *Abitur* who engage in employment before beginning their courses of study at a university. However, this cannot be made into a regulation because all people with the *Abitur* initially denied admission to the university would make use of it; thus a measure designed to give an advantage to some applicants would have to be applied to everyone, and would therefore make no sense. Furthermore, in view of the unemployment rate among young people, one would have to consider whether the insufficient number of job training places would be claimed by people with the *Abitur* to the detriment of other young people.

Continuing Need for Changes in Regulations Governing Access to Higher Education

A consistent educational policy must do one of two things. Either it must create enough new study places so that every applicant will receive a place (though perhaps not in the field of his choice), despite the danger that after 1986 there will be unused capacity as the falling birthrate since 1966 begins to have its effects. If educational policy makers determine that they cannot afford such an expenditure of resources, they must insure that there are only as many people with the higher education qualification as there are available study places. In this case, it would definitely be possible to deal with a tolerable overoccupation level for the next ten years. Under current laws governing access, such an approximate correspondence between people and study places is impossible. In any case it is politically dangerous to grant higher education qualifications, thus raising people's expectations, and then not to make good on one's guarantees. Moreover, this is legally inadmissible, since, as the Federal

Constitutional Court has confirmed, the constitution guarantees that those with the higher education qualification be given a study place.

Reform measures in secondary schools at the beginning of the 1960s softened somewhat the strict assumption that the only people qualified to study at the university were those who have mastered at least two foreign languages, who understand the culture of their own country, who have learned higher mathematics, and who have a good knowledge of the natural sciences. Aside from the three original *Gymnasium* types (classical languages, modern languages, and natural sciences), new types were created which could also confer the higher education qualification: *Gymnasia* concentrating in the arts, business and economic subjects, social sciences, etc.; these new school types placed more value on specialized "gifts" on the part of the pupils. The possibilities for transferring from any level in one type of school to another (e.g., from the *Realschule* to the *Aufbaugymnasium*), the so-called flexibility of the system, does justice to varying rates of intellectual and psychological development in pupils, and takes care that they are not permanently assigned to any one track too early. Finally, the reform of the advanced classes at the *Gymnasium*, which was decided by the Conference of Cultural Ministers on July 7, 1972, insures that more attention is paid to individual interests of pupils in the same school. The result of this flexibility, differentiation and individualization of the school system, is that more and more pupils are receiving the higher education qualification through the *Abitur*. The number of ten-year olds entering the *Gymnasium* from the *Grundschule* (the first four school classes, which are standard for all pupils) rose rapidly in the last ten years, as did the "success quotient," that is the number of people receiving the *Abitur* (today almost 70% of those who enter the *Gymnasium*). The increased possibilities for receiving the *Abitur* are accompanied by demographic developments: the birthrate which rose constantly until 1966 will have its effects in the next ten years, thus making for larger numbers of pupils with the *Abitur*.

At the present time about one third of all beginning students at universities have been admitted without the *Abitur*.

The universities must strive for a situation wherein they can assume a standard level of preparation on the part of beginning students. The medieval university had its Faculty of Arts, which later became the Philosophical Faculty in Germany. (The seven Arts were the Trivium with grammar, i.e., Latin; dialectics, i.e., logic; and rhetoric as well as the art of letter writing; and the Quadrivium, which presupposed knowledge of the Trivium; arithmetic, geometry, astronomy, and musical theory.) In modern times, the *Gymnasium* insured that the universities were supplied with beginning students who had undergone a standard preparation. This situation no longer obtains. Thus there are two reasons why access regulations should be changed. The first is to reach a correspondence between the number of study places and the number of people with the higher education qualification, so that we no longer have numbers of young people who have obtained a right of access which will not be realized. Second, so that the universities will once again be able to proceed from the assumption that their entering students have a standard level of academic preparation.

In my judgment, one model for the reform of access regulations deserves to be treated separately here. I mean the model proposed in January 1976 by the former president of the West German University Rectors Conference, Gerd Roellecke, and his assistant, Peter Kickartz. These men had the clever idea of publishing their proposal in the form of a legislative outline, in order to demonstrate its legal and technical practicality. Their basic idea is that, because of the many types of higher education qualification and the high expectations of young people, it will henceforth be impossible to solve the problem solely within the schools. Therefore they disregard the current multiplicity of school types; indeed, their plan does not regard any type of secondary education in itself as a condition for studying at the university.

Rather, they propose a higher education access examination which would be given once a year; anyone could take this examination, and it would be administered by a special agency. The examiners would be university professors and secondary school teachers with the qualification to teach in the advanced level at

the *Gymnasium*. The examination itself would be written and anonymous. It consists of ten sections lasting four hours each. There are three general fields to be examined: cultural sciences, natural sciences, and engineering sciences. For example, the cultural field would involve ten four-hour examinations in the following subjects: German language, the history of German literature, Latin, English or French, mathematics, physics, history, geography, social studies, and philosophy. Each university determines the number of study places in each discipline and announces the maximum number of beginning students to be admitted. This determination will be carried out personally by a committee composed of representatives from the university and the relevant state ministry. The method to be used here is quite simple and avoids the difficulties involved in capacity calculation. An applicant's point score from the examination determines his ranking for the desired field of study. Anyone not attaining a certain score has failed the examination; this would insure that unqualified examinees could enter fields of study study with small numbers of applicants. Its disadvantages would have to be pointed out as well: for example, the drawback that rich parents could have their children tutored until they could pass the examination, while poorer parents could not. However, I believe that the model offered by Roellecke and Kickartz at least constitutes a beginning in the attempt to deal with the problem of access; it could form the basis for further efforts. Unfortunately, though, due to the strength of interest groups (*Gymnasium* teachers) and political factions, there is little hope that this plan would be heeded. Thus anyone observing the scene at the moment sees no way out of the dilemma presented by the access regulations currently in force.